



## P4120 – Genesys 20 分光光度计

### 技术和使用信息

#### 概述:

该信息页是关于WINdose剂量系统一部分的仪器的使用说明。它提供了有关如何使用该系统测量GEX B3薄膜剂量计的具体信息。有关如何使用该分光光度计测量气体剂量计的具体信息请联系GEX公司客服人员。GEX技术备忘录100-210和Genesys20手册提供了Genesys20的详细信息。这里所引用的GEX文件可以从[www.gexc corp.com](http://www.gexc corp.com)网站上获得。

#### Genesys20手册:

请查阅Genesys20分光光度计手册获取关于规格参数、操作、性能确认和仪器的维护的详细信息。这里提供的信息应该被认为是一个补充。

#### 性能确认:

在发运之前, 该仪器经过了Thermo电子公司和GEX公司的性能确认测试。有两个性能确认测试项目, 一个在开机时由仪器自动执行, 另一个必须由用户执行。

**POST 开机自检确认:** 该仪器在每次开机时会执行一系列的测试。这就是所谓的POST (Power On Self Test). GEX建议用户每天至少开关仪器一次, 如果仪器连续使用的话, 这样仪器可以每天运行一次POST测试。

**使用经鉴定的滤光器进行光学性能确认:** GEX建议使用Spectronic Standards (GEX part# P4220) 进行性能确认测试, 尽管其它一些滤光器也可以代替使用。遵照GEX的程序文件100-254的说明进行, 其内容和Spectronic Standards手册里的程序内容一致。它将测试仪器的杂散光、波长精度和光度计的性能。GEX推荐每30天(每月)执行一次该测试。

#### 校准:

该仪器不能在现场校准, 它也不需要校准, 除非性能确认失败。校准需要由制造商或其授权的经销商执行。详情请联系GEX公司。

#### 确认:

用户应该根据自己公司的有关设备或过程确认的程序文件确认仪器。

#### 日常操作:

该仪器的开机默认波长在GEX公司被设为552nm。这是B3薄膜剂量计推荐的测量波长。剂量计的测量应该是在仪器被设为吸光度操作模式下进行。注意: 以前, B3剂量计分析波长被规定为554nm, 这个值已经被重新评估并被修改。更多信息请参考GEX技术备忘录100-205和100-210。

GEX已经设计了专门用于WINdose和DoseStix型剂量计的剂量计保持架。为了确保高度的可重复的测量, 请在测量时确保杯形保持架(Cuvette Cup)总是被牢牢的插入并“啪”地一声卡到位。

#### 仪器的启动:

- 移去剂量计和杯形保持架, 打开仪器电源
- 运行仪器预热至少30分钟
- 插入含有剂量计保持架的杯形保持架
- 关闭样品室盖子并按“0 ABS”按钮(清零)

#### 维护与保养:

**清洁:** 当仪器保持清洁的时候就能获得最佳的性能。不要打开仪器的壳体。GEX建议使用压缩空气定期清洁样品室。

**灯泡更换:** 关于灯泡更换的详细说明请参考产品手册。在灯泡更换前后应该执行仪器的性能鉴定。只是很关键的, 因为灯泡更换是唯一用户执行的仪器的物理变换的操作。

**杯形保持架更换:** Over time, 杯形保持架内的弹簧片随着使用时间的加长会磨损并将影响测量的可重复性, 根据使用的数量定期更换, 更换件是GEX part# P4121。

#### 保修:

Genesys 20 提供一年厂家质保, 用户自行更改将是保修失效并由用户自己承担责任。更多详情请查看制造商保修信息。



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#### General:

This information sheet pertains to the instrument's use as part of the WINdose Dosimetry System. Specific information is provided regarding the use of the system for the measurement of GEX B3 film dosimeters. For specific information on the measurement of other dosimeters with this spectrophotometer please contact GEX Corporation Customer Service. Detailed information on the Genesys 20 is provided in GEX Technical Memo 100-210 and the Genesys 20 Manual. GEX documents referenced here are available at [www.gexc corp.com](http://www.gexc corp.com).

#### Genesys 20 Manual:

Please refer to the Genesys 20 Spectrophotometer Manual for explicit detail on the specifications, operation, performance verification and general care of the instrument. Information supplied herein should be considered supplemental.

#### Performance Verification:

The instrument was performance verification tested by both Thermo Electron Corporation and by GEX Corporation prior to shipment. There are two performance verification tests, one performed by the instrument automatically when it is turned on; the other must be performed by the user.

*POST Verification:* The instrument performs a series of tests each time the unit is turned on. This is called POST (Power On Self Test). GEX recommends that users turn the instrument off and on at least once each day if the instrument is used continuously, so that the instrument may run its POST testing daily.

*Verification of Optical Performance using Certified Filters:* GEX recommends the use of Spectronic Standards (GEX part# P4220) for the performance of verification testing, although other filters may be used instead. Follow the instructions in GEX Procedure 100-254 which are in compliance with procedures in the Spectronic Standards Manual. This will test the instrument for Stray Light, Wavelength Accuracy and Photometric Performance. GEX recommends performing this testing every 30 days (monthly).

**Calibration:** This instrument cannot be calibrated in the field. The instrument should not require calibration unless it fails performance verification. Calibration is performed at the manufacturing site or by an authorized vendor. Contact GEX for details.

#### Validation:

The user should validate the instrument according to their company procedures for equipment/process validation.

#### Routine Operation:

The instrument is set at GEX Corporation with a default wavelength at start-up of 552nm. This is the recommended wavelength of measurement for B3 film dosimeters. Dosimeter measurements should be made with the instrument set in the absorbance mode of operation. NOTE: Historically, the analysis wavelength for B3 dosimeters was stated at 554nm. This has been re-evaluated and changed. For more information see GEX Technical Memo's 100-205 and 100-210.

GEX has designed specialized dosimeter holders for our WINdose and DoseStix style dosimeters. To ensure highly repeatable measurements, ensure that the cell holder (aka Cuvette Cup) is always inserted firmly and 'snapped' into place when making measurements. See the inserts for each specific type of dosimeter holder separately.

Instrument start up:

- Remove the dosimeter and cell holder and turn on the instrument.
- Allow the instrument to warm up for at least 30 minutes.
- Insert the cell holder with dosimeter holder.
- Close the sample compartment lid and press the "0 ABS" button.

#### Care and Maintenance:

*Cleaning:* Optimal instrument performance is always achieved when the instrument is kept clean. Use good housekeeping practices to maintain the instrument appearance and function. Never open the instrument casing. GEX suggests the use of compressed air to clean the sample compartment on a regular basis.

*Lamp Replacement:* See the manual for detailed instructions on lamp replacement. Instrument performance verification should always be performed before and after a lamp replacement. This is critical because replacing the lamp is the only operation a user performs that is a physical change to the instrument!

*Cuvette Holder Replacement:* Over time, the spring in the cuvette holder will wear and will affect the repeatability of measurements. Replace the cup at specified intervals depending on the amount of use. Replacement is GEX part# P4121.

#### Warranty:

The Genesys 20 is supplied with a one year manufacturer's warranty. User modifications are not warranted and are the sole responsibility of the user. See the manufacturer warranty information for more details.